
CHAPTER 4: UTILIZING NLSY79 CHILD AND YOUNG ADULT DATA FOR RESEARCH

Introduction

The preceding chapters in this guide have discussed a variety of issues that will help users understand and use the NLSY79 child data. In this section, we outline some research topics for which these data seem particularly appropriate. This chapter will not consider specific research topics in any depth, but rather suggest, drawing on materials from the earlier chapters, the range of topics that can be explored. We suggest ways that the main NLSY79 mother data, the younger children data, and the young adult data can be linked, permitting researchers to carry out not only within but cross-generational research. Specific procedures for accessing and linking the data files are discussed in Chapter 5.

Data have been collected from the NLSY79 main respondents since the first interview round in 1979. An in-depth discussion of the data available from and about these main respondents may be found in the most recent edition of the *NLS Handbook* and the *NLSY79 User's Guide*. As described in the preceding chapters, since 1986, a wide range of behavioral, characteristic, and attitudinal information has been collected from and about the children who have been born to these women, children who as of 2000 range in age from infancy to almost middle age. Large samples of these children are available for analysis for most ages up to and including the mid to late 20s. Large minority samples are available for analysis. As described in Chapter 1, the potential exists for a variety of sibling-oriented analyses. Techniques are available for enhancing the sample sizes for relatively narrow age ranges that at the same time greatly increase the heterogeneity of the sample. From the perspective of maternal childbearing, the child sample now encompasses about 90 percent of the children that will ever be born to this cohort of women (who as of the current survey point have attained the ages of 35 to 43). However, from the perspective of their children, it is useful to recall that the older the children, on average, the younger their mothers were at the time of their birth. This sample selection issue, highlighted in Chapter 1, becomes less significant with every passing survey round, as the older children are increasingly born to women who gave birth at mainstream childbearing ages.

Life Cycle Profiles for the NSLY79 Children

The data elements that have been collected for the younger children as well as the young adults have been highlighted in Chapter 2 and Chapter 3. In this chapter the attempt is made to integrate some of these topical areas across the life cycle suggesting how they may be

integrated into more comprehensive research agendas. Table 4.1 follows two child birth cohorts through their NLSY79 years, suggesting how the data can effectively be used to describe the children's whole lives from several disciplinary perspectives. The items and years referenced in this table are approximate, but in conjunction with the content of prior chapters they should offer interested readers some perspective regarding the potential longitudinal utility of these data. Other ages could have been selected. Larger sample sizes for specific ages can be generated that would permit users to attach similar, and often identical, explanatory inputs to children who had been at specific ages but in different years.

Table 4.1. Data Elements Available over the Life Course for Two Age Cohorts

Available Data	1983–1985 Births	1977–1979 Births
Age in 2000 (by Dec.31)	15–17	21–23
Sample Size in 2000	1098	676
Mom Age at Birth	19–28	13–22
Key Data Elements		
Pre-/Postnatal Information	Yes	Yes
Child Residence Information	Lifelong	Age 6 (approx) onward
Detailed Child Health	Age 2–3 onward	Age 7–9 onward
School Early Years	1989/1991	1983/1985
Child Assessment Years	1986–1998	1986–1992
HOME Assessment	1986–1998	1986–1992
Behavior Problems	1986–1998	1986–1992
PPVT	1986/1988 and 1994/1996	1986, 1988/1990, 1992
PIATs	1988–1998	1986–1992
Adolescent Self-Report	1994–1998	1988–1994
Young Adult Survey	1998–2000	1994–2000

This brief lifespan summary should be considered in conjunction with the materials detailed in Chapters 2 and 3 that discuss the data elements only touched on here. The focus in Table 4.1 is on two young adult birth cohorts. The first, born in 1977–79 was 21 to 23 years in 2000. The second cohort, born in 1983–85, was between the ages of 15 to 17 as of the end of the 2000 calendar year. These two cohorts are analytically useful because their life spans incorporate data elements from both the younger children and young adult data sets as well as many of the adult years of their mothers. These two young adult cohorts include one group (those born in 1972–79) that fully incorporates all of the NLSY79 survey years, has reached incipient adulthood and is well along the path towards mainstream adulthood. The 15 to 17

year olds, the younger of the two groups, have had their full lifespan profiled by the NLSY79 years by virtue of having been born in the early to mid-1980s. Because both of these cohorts have lived most of their lives within the time frame of NLSY79, these data can be used to define their lives in major respects. First, we know a great deal about the child's family environment over the whole period, and this is synthesized in Table 4.2. Indeed, many of the data elements that we have emphasized in the preceding chapters as being available, particularly for the older children, were also asked of their mothers in their middle to later adolescent years. Beginning with the mother's adolescent years, attitudinal and behavioral information about the maternal generation's own developmental path is available. They had been asked about their own educational, employment and family aspirations when they were the ages that many of their children are now. We have information about their schooling progression and from early on about their employment experiences, and marriage and childbearing experiences. This and other related information was systematically updated at every survey round. There is also comprehensive annual income and individual earnings information, household structure updates, and county of residence information (available on a separate geocode file). Attitudinal information, such as the Rosenberg self-esteem scale and a sequence of items on attitudes towards women's roles, is available in selected years, along with a uniform battery of tests of maternal cognition and educational achievement (the Armed services Vocational aptitude Battery, or ASVAB). There also is a short series of questions probing into the mother's religion and religious upbringing. Finally, moving backwards essentially an additional generation, the 1979 first round included a series of questions probing into the socio-economic background of the mother, as measured by the occupation, earnings, and related questions about her parents (i.e., the children's grandparental generation) while she was growing up. This background input incidentally was greatly enhanced by a detailed childhood residence history for these mothers that was collected retrospectively in 1988. We will incorporate some of the above into the discussions of specific research possibilities that follow. Also, the interested reader is referred to the *NLS Handbook*, *NLSY79 User's Guide*, and selected year-specific interview schedules, as appropriate.

Table 4.2. NLSY79 Mothers & Children: Comparable Attitudinal and Behavioral Questions

NLSY79 Mothers	Children 10 & Older	Young Adults
Educational Aspirations/ Expectations, own & child's	Educational Expectations	Educational Expectations
Women's Roles	Gender Role Attitudes	Women's Roles
Employment, own	Employment/Work for Pay	Employment
Marriage & Birth Expectations	Marriage & Birth Expectations	Marriage & Birth Expectations
—	Sex Education	Sex Education
Early Sexual Activity	Early Sexual Activity	Early/Current Sexual Activity
Early Childbearing	Early Childbearing	Early Childbearing
Pearlin Mastery	—	Pearlin Mastery
Rosenberg Self-Esteem	Child Loneliness; SPPC	Rosenberg Self-Esteem
Locus of Control	Peer Pressure	—
Depression Scale (CES-D)	Child Moods	Depression Scale (CES-D)
AIDS Knowledge	Pregnancy Knowledge	Pregnancy Knowledge
Religion, own & child's	Religion & Attendance	Religion & Attendance
Delinquency; Police Contact	Non-Normative Behavior	Delinquency; Police/Justice System Contact; Non-Normative Behavior
HOME Items on Family Activities	Parent-Child Joint Activities	—
School Discipline, own & child's	School Discipline	School Discipline
Child HH Chore Expectations & Time Spent	Family Decision-Making	—
Child Closeness to Each Parent	Parent-Child "Closeness"/Interaction	Parent-Child "Closeness"/Interaction
Relationship (Marital) Quality	Mother-Father Consensus; Dating	Relationship Quality (Spouse, Partner, or Steady Boy-/Girlfriend) Mother-Father Consensus; Dating
School Rating/Satisfaction, own & child's	Child Satisfaction with School	Child Satisfaction with School
Trouble in School (BPI & MS child items)	Bring Parent to School	Bring Parent to School
Parental Monitoring	Parental Monitoring	Limit Setting
Parental Involvement in Child's School	Parental Involvement in Child's School	Parental Involvement in Child's School
Neighborhood Safety	Neighborhood Safety	Neighborhood Safety
TV Viewing by Child	TV Viewing	TV Viewing
Knowledge of Child's Friends	How Much Tell Parents about Friends	—
Childhood Residence, own	Time Away from Parents; Contact with Nonresident Father	Reasons Left Mother's HH; Contact with Nonresident Father
Cigarette, Alcohol, & Drug Use, own	Cigarette, Alcohol, & Drug Use	Cigarette, Alcohol, & Drug Use

NOTE: Items in the "NLSY79 Mothers" column that are qualified with "own" refer to reports about her own behavior; questions where she reports on her own AND her child(ren)'s behavior are noted.

The older of the two groups specified in Table 4.1 was born between 1977 and 1979, either shortly before or immediately after the NLSY79 cohort was initiated. About 675 respondents in this cohort of young adults, who were ages 21 to 23, were interviewed in 2000. These children were mostly born to quite young mothers. While comprehensive pre- and postnatal information for all children born to female respondents did not begin until 1984, retrospective information for all children was collected in subsequent, 1985 and 1986 survey rounds. Thus, for almost all these young adults, there is considerable information about maternal behaviors during pregnancy, birth-related information, and health-nutrition related activities during the first year of life. Details on these pre- and postnatal variables are discussed in Chapter 2. Also, beginning in 1986, when the children in this cohort were between the ages of seven and nine, fairly detailed information about health-related behaviors were assessed from biennial maternal reports for each child. This health reporting continued through 1992 from the mothers, and directly from the young adults since that date. Also, since 1984, when these children were 5 to 7 years old, we have detailed child and paternal residence information, including visitation information for absent fathers. Beginning in 1986, we have school progression information. Once they attain age 10 (1988 or 1990 for the respondents in the example), the surveys contain more information about their behaviors and experiences. These self-reports for children 10 and over include details about joint activities and interactions with parents, parental rules about activities and behaviors, household decision-making processes, peer pressures, attitudes about school, after-school employment and other extra-curricular activities, incipient substance use, involvement in a variety of non-normative activities, religious activities, dating relationships, sex education and expectations about future marriage and family (in the more recent survey rounds, the depth of the content for some of these topical areas was expanded to collect details about within-family interactions), and—for those age 13 and over—items about sexual activity. Mothers are asked to report on their children's schooling success (e.g., grade repetition, reasons for success or failure) and each child in this age range is asked to rate the quality of the school attended, how the youth feels about his or her life in general, and parental supervision activities from the mother directly.

Intercohort Analyses

Collection of the most unique data elements available for these respondents began in 1986, the first year we began this data collection effort, and continued through 1992, the last biennial survey point prior to their reaching age 15 for this particular cohort. From a cognitive perspective, virtually all of these children completed the PIAT mathematics and reading assessments four times—in 1986, 1988, 1990, and 1992. They all completed the Peabody Picture Vocabulary Test in 1986 and 1992, and at one additional intervening point depending on their age. At each survey point in which they were age-eligible, their mothers completed the 28-item Behavior Problems scale as well as the NLSY79 version of the Caldwell and Bradley HOME scale. This last assessment complements in important respects the information collected directly from the child in the adolescent self-report booklet noted above. The child self reports, in combination with maternal and child assessments for the 10- to 14-year-old age period, allow comprehensive examination of cognitive, socio-emotional, and behavioral development during these critical late-childhood/early adolescent years.

Beginning in 1994, all of these child respondents had attained young adult age, and almost all began completing the interviewer administered NLSY79 style questionnaire as well as a self-report booklet that addressed a variety of more personal and confidential issues. The young adult surveys are detailed in Chapter 3. A large majority of these respondents have data from four survey points. (Those who had attained age 21 as of the 1998 survey date were not eligible for interview in that year, but were once again administered the survey in 2000. For these youth, questions were asked in 2000 to capture critical behavioral information covering the 1996-2000 gap.) The young adult surveys include detailed data collection for these youth including schooling, employment, and family event histories, as well as a rich attitudinal profiling of these youth over the period. The data permit a careful descriptive and analytical exploration of the linkages between the teen and early adult years. More generally, the data set permits an examination of the connections between children's early childhood, adolescent years, and early adulthood, and how this process may connect with attitudes and behaviors from the child's family of orientation. Table 4.2 highlights the wide range of inputs and outcomes available for such analyses—from the mothers as well as the child's generation, and for younger as well as older children. Of course, as noted above, one constraint for this specific cohort is that the explorations must of necessity focus on a group of youth who had

been born to younger mothers, with all that that may imply for social and economic disadvantage.

We now focus briefly on the other birth cohort highlighted in Table 4.1, those youth born in 1983 through 1985. These youth, who are all between the ages of 15 and 17 in the year 2000 clearly have lived their whole lives within the NLSY79 life span. The advantages of this younger cohort are that they have been born to a more mainstream group of mothers, and that the data available for and about them were almost all collected on an on-going as opposed to retrospective manner. Also, because they have been born to somewhat older women, there are many more of them—almost 1,100 by 2000. Of course, by virtue of their more recent births, they have only recently entered the young adult life cycle stage.

Because of their more recent birth, we have available a relatively continuous family and household profile, both for them as well as for their mothers. This includes contemporaneous information about their residence structure, paternal presence-absence and possible visitation patterns, and virtual life-long health profiles. Also, beginning at very early ages, between ages one and three, this child cohort has been administered the full range of cognitive, and socio-emotional assessments. Beginning in 1994, when most of these youth had already attained age ten, they began completing the age ten and over self-report booklet. Over the 1998-2000 survey rounds, all of these child respondents attained young adult ages, and began completing the more comprehensive regular style NLSY79 interview. Of course, in the 2002 and subsequent survey rounds, these child respondents will rapidly move more fully into the early adult ages, completing their schooling, attaining family responsibilities, and become more fully integrated into the work force.

Other birth cohorts could have been selected equally as well for this profiling. The reader can profile other cohorts, or explore how several age cohorts can be combined to broaden as well as increase the sample size for analysis. Additionally, depending on one's research objective, one can explore how siblings of different ages would fall out in terms of having parallel data elements, albeit in different survey rounds. Additionally, a more detailed look at Table 4.2 will suggest the possibility for finding conceptually similar items for exploration across generations. For example, a number of the attitudinal sequences, including some of the expectation items, a sequence on women's roles, a depression scale, and even satisfaction with schooling are asked in a similar way of mothers and children—at younger

and older ages. Many of the behavioral sequences—including early sexual activity and childbearing, religious involvement, substance use or other non-normative activities have been asked one or more time of the mothers and children. Thus the research possibilities for exploring intergenerational transmission of attitudes and behaviors, to one or more siblings in the child generation, are considerable. Finally, in this regard, there are a limited number of instances where mothers and children are asked essentially mirror images of the same questions, so responses of mothers and children can be compared. This includes questions on parental monitoring, school satisfaction, schooling behaviors, and knowledge about the child’s friends. Therefore, it is possible to explore whether mothers and children are on the same wavelength regarding whether or not they are viewing child or mother activities, or knowledge level, in a similar way.

Possible Research Agendas

The above sections described in a general way possible useful perspectives when considering the NLSY79 child and young adult data for social science research. This section considers a variety of research possibilities within the context of the NLSY79 and its available data components. Both within and cross-generational research possibilities will be briefly considered. To some extent, specific technical issues associated with these research perspectives have been considered in earlier chapters and will be detailed in Chapter 5. Information from Table 4.3 will be selectively utilized in this discussion. On the surface Tables 4.2 and 4.3 appear similar. However, whereas the objective of Table 4.2 was to suggest comparable data items across the generations, the objective here is to highlight conceptual areas that are useful for explaining within and cross-generational attitudinal profiles and behaviors. Once again, it is emphasized that while the data set at this point has some methodological limitations, particularly regarding heterogeneity at the older child ages, it also has considerable strengths. For example, it has large samples at many ages that can be enhanced, a wide range of attitudinal and behavioral items for exploring mother and child connections, substantial minority over-samples, and a large sibling sample. At most younger ages, as has been described, these relatively large samples are quite heterogeneous, including large numbers from all socioeconomic strata. The older children at this time represent an ideal sample for exploring a wide range of programmatic and policy issues related to the adjustment process and mainstream economic and social assimilation of disadvantaged youth,

while at the same time permitting comparisons with children who have been born to relatively younger but middle class mothers. In the immediate years ahead, the sample sizes and heterogeneity of the older youth will increase considerably. We now consider a number of research options for which the current data set is most appropriate.

Table 4.3. Cross-Generational Research Possibilities

Maternal Background & Inputs	Childhood Mediators	YA Mediators & Outcomes
Demographic	Pre-/Postnatal Information	Demographic
Race/Ethnicity	Maternal Work History	Race/Ethnicity
Religion	Maternal Work History	Religion
Region	Child Care in 1 st Three Years	Region
Urban/Rural	Temperament	Urban/Rural
Migration Patterns	Motor and Social Development	Migration Patterns
Behavioral	Body Parts	Behavioral
Age at Menarche	Memory for Location	Age at Menarche
Age at 1 st Sex	Digit Span	Age at 1 st Sex
Age at 1 st Birth	PIAT Math	Age at 1 st Birth
Age at 1 st Drug Use	PIAT Reading	Age at 1 st Drug Use
Age at 1 st Marriage	PPVT	Age at 1 st Marriage
Deviant Activity	HOME	Age at 1 st Cohabitation
Social Psychological	BPI	Deviant Activity
Self-Esteem	SPPC	Sexual Activity
Depression	Preschool/Head Start	Dating Activity
Locus of Control	Regular Schooling	Social Psychological
Mastery	Health	Self-Esteem, Depression,
Women's Roles	Relationship with Parents	Mastery, Women's Roles
Early Formative Influences	Risk Taking	Goals/Expectations for Education
Goals/Expectations for Education	Depression	Educational Attainment
Educational Attainment	Gender Attitudes	School to Work Transition
School to Work Transition		Marital History/Relationship Quality
Marital History/Relationship Quality		Job History
Job History		Military Service
Military Service		Reciprocity
Reciprocity		Transition to Parenthood
Father's Background (for years married to mother)		Parenting attitudes and behaviors
		Father's Background (for non-residential fathers)

Exploring Cognitive and Socio-Emotional Trajectories

Chapter 2 has detailed the comprehensive trajectories available for following children across time, in many instances from infancy or “toddlerhood” to mid-adolescence. To our knowledge, this is one of the few large-scale data sets that permits researchers to examine the same children repeatedly over time, exploring linkages between intellectual and emotional development, or stability in scores on the same or similar assessments over time. Several examples may usefully clarify this theme. For the 1983 to 1985 birth cohort highlighted above, it is possible to examine over-time connections between infant and early childhood cognitive batteries such as the Kagan memory for location assessment, the body parts assessments, or the temperament scale and later intellectual development. Linkages, including possible causal connections, can be explored between these early cognition measures and not only *levels* of subsequent cognition (as measured, e.g., by PPVT or PIAT scores), but also intellectual *trajectories* over the early childhood to middle adolescent period. In addition to being able to explore differences in levels and trajectories overall, it is possible to consider variations in trajectories between different socio-economic or racial/ethnic groups. Most importantly, variations in trajectories may be linked with differences in life cycle paths. The information available relating to family structure and family economic well-being over time can be used to consider how variations in trajectories, or indeed connections over time between different assessments can be independently linked with variations in background factors or more contemporary family or individual variations.

Validity of Repeat Measures

The data may also be effectively used to explore the face validity of selected assessments over time. As noted, some children have taken the PIAT assessments as many as five times, so it is possible to examine the stability of normed scores over time (bearing in mind that the sample cases were normed against national standards). Similarly the mothers have repeatedly completed a 28-item behavior problems scale for all of their children as they have aged from 4 to 14 years of age. One can explore stability and instability in these scores over time and consider how trajectories over time may be linked to other family factors, including scores on the HOME scale (described in detail in Chapter 2). Repeated measures on this HOME scale provide comprehensive information about the quality of the child’s cognitive and socio-emotional home environment for the full first 14 years of a child’s life.

These home quality dimensions, as well as components of these scales, may be temporally linked with the child's development. Indeed it can be hypothesized that a child's behavior can impact on the home environment (partly perhaps as parents alter the environment to suit their children's needs), and also, perhaps even more so, the environment can alter a child's development process. The repeated measures on these scales, in conjunction with related family information, permit researchers to explore relevant connections in a comprehensive and methodologically more refined way than is typically possible. It is also suggested that the availability of many sibling pairs (see Tables 1.9, 2.18, 2.19, and 3.4) permits a more careful exploration of how within-family transitions can alter intellectual and socio-emotional developmental processes. While this discussion has mentioned selected assessments, it should be noted that over the years a wider range of assessments has been given to (or about) the children. These additional assessments may be useful for specialized analyses. Also, as described in sections that follow, selected assessment may be of particular value as intervening measures for explaining many within and between generational processes.

Early Family and Relationship Transitions and Behaviors

The NLSY79 child and young adult surveys represent a very good data source for exploring the antecedents and trajectories for middle and late adolescent to early adults relationships. Beginning at age 13, the children have reported on their early sexual activity and fertility experiences. Starting at age 15, in-depth information has been collected about relationships in which they have been involved. Beginning with the 1998 survey round, a sequence of items that describe the full range of heterosexual relationships that sexually active youth can be part of are included in the young adult data collection. Family and maternal inputs, as well as over a decade of child assessment information, permit exploration of the mechanisms relating to transitions in the family arena in a comprehensive manner. This includes not only transitions into early relationships but also exploration of why some early relationships last and others do not; why some cohabitations, perhaps reflecting prior attitudes of these children and their families, ultimately turn into marriages; and what seems to be linked with a tendency for some young adults, men and women, to undertake early childbearing while others delay parenthood. Researchers can explore intergenerational tendencies to form early relationships and begin childbearing at early ages. In particular, it is possible to explore in some detail why some youth from relatively disadvantaged families

effectively avoid some of the hurdles posed by early parenthood whereas others are less successful.

Young Adult Schooling and Work Outcomes

Additionally, the data set represents an ideal vehicle for examining how all of the above complexities of early relationship patterns and trajectories are linked with greater or less success regarding late adolescent education progression as well as transitions into the work force. From an employment perspective, there is information about summer and school year employment for these youth from early adolescence onward. There is considerably greater detail regarding the nature and intensity of employment and training experiences during the late adolescent and early adult years. Additionally, the young adult data set includes comprehensive information about later educational experiences from both a behavioral and attitudinal perspective.

Geographic Moves, Location, and Employment

This data set offers some unique opportunities for exploring the inherently complex connections between geographic moves, early family structure transitions, and human capital. Because many of these youth have been effectively tracked since birth, first in their mother's home, and more recently, in increasing numbers, in their own homes, it may be possible to gain clarification regarding the causal connections between some often endogenous processes. A special geocode file is available for all survey rounds for the main respondents in the NLSY79, and is now available in addition, for 1994 to 2000, for all the young adults in the survey regardless of their residence. This data file, described in Chapter 3, can be linked with all of the NLSY79 main, younger child, and young adult data.

Migration of young people is an important feature of their early life course, and having geographic detail on a concurrent basis permits a careful study of residential move patterns, their determinants and consequences. The migration literature points to the importance of family connections in helping to explain migration. The residence information in the young adult data permits researchers to now look at the past locational record of the youth as well as where selected family members live.

From a different perspective, the availability of county-level information for most of the lives of the children permits the exploration of potential connections between intellectual

and academic success and the residential dislocation of children. It is possible to examine in a causal context whether or not younger children and young adults are academically disadvantaged if they are subject to repeated geographic movements throughout their formative years.

The locational data also support examinations of a history of fine level geography on subsequent earnings during the early years of adulthood, particularly when this geographic trajectory is augmented by school quality information. How this geographic history is linked with prior intellectual “success,” as measured by the range of childhood cognitive assessment information available, and how this all translates into later human capital investments can now be explored with these data.

Non-Normative Behaviors across Generations

As Table 4.2 suggests and is detailed in the *NLSY79 User’s Guide*, this data set is very appropriate for exploring cross-generational tendencies for family members to repeat non-normative behaviors. The child data can be used to explore substance use trajectories over time, and possible linkages between this trajectory and a wide range of parallel child and family behaviors and attitudes. Data available for these analyses include detail on school-linked behaviors and attitudes, the transition from school to work, economic well-being through adolescence, contact with the legal system, self-reports on a variety of delinquent activities, substance use over time, and attitudes which have been shown to be linked with subsequent “success” in several life domains. Many of these data elements are available for both the children and their mothers at comparable life cycle points. In addition to these micro-level connections, it is possible to examine selective tendencies, i.e., the *kinds* of family units that appear more protective, and evidence a better ability to break intergenerational connections of activities or behaviors that might typically be considered non-productive. The young adult geocode file, which contains county-level identifiers, enhances the possibility for sorting out the potential relevance of area-level factors that either additively or interactively may affect connections within and between generations. This is one area of research where sibling histories can help clarify within- and between-family life cycle considerations. For example, to what extent are tendencies to follow selected non-normative pathways conditioned by specific family situations that were prevalent at specific earlier child ages?

The data set is particularly suitable for considering potential cross-generational connections. As noted above, there are many possibilities for exploring cross-generational linkages between personal and family attributes evidenced early in a mother's life cycle and a variety of younger child and young adult behaviors. Independent of other family factors, to what extent are early adult behaviors among the older children, which have potential negative consequences for their progression to "successful" adulthood, parallel to similar early behavior among their mothers? As Tables 4.2 and 4.3 indicate, data elements available for both mothers and children include information on early sexual activity, the Rosenberg self esteem scale, the Pearlin mastery measure, depression measures, items measuring attitudes towards the roles of women in society, early (during adolescence) expectations regarding family, education and work, and school satisfaction. All of these inputs, as well as the wide range of behavioral information, permit researchers to sort out cross-generational socio-economic predictors of non-normative child behaviors from other perhaps more subtle non-normative mother to child connections. In this regard, there are available in this data set a broader range of mother and family traits than are typically available for research of this kind. The Behavior Problems scale, and a number of other child assessments that have been repeatedly completed for each child, can help clarify the mechanisms behind any cross-generational propensities for non-normative behaviors. They do this by providing important explanatory insights regarding the long-term patterns of parent-child interaction, the quality of the cognitive and emotional home environment, and indeed several dimensions of the youth's development process from childhood through later adolescence. These data are available for all children in the same families, so an exploration of the effects of interactions of these assessments with other ongoing family events as well as their temporal occurrence in the life cycle can be considered. This kind of research may help clarify which higher risk families and which children within those families are able to avoid the repetition of dysfunctional behaviors in the younger generation.

How Children Affect Mothers

For those interested in exploring possible feedback effects, the repeated child measurement for several behaviors and attitudes, in conjunction with the detailed information available about maternal behaviors, permit one to sort out to some extent the effect of changing child behaviors on subsequent actions of their mothers. For example, just as one

can examine the impact of maternal employment on a child's behavior, or changes in a child's behavior, one can explore how changes in a child's behavior or health can affect subsequent maternal employment decisions!

Variation in High School and College Attendance

The NLSY79 data file includes in-depth information relating to both maternal/family and youth priors that typically are considered significant analytical predictors of young adult schooling decisions. As the data collection gets extended past the mid-adolescent ages, the censoring issue associated with both very early school leaving and early childbearing is reduced. As of 2000, the data set offers reasonably large samples of youth past adolescence, as well as fairly substantial minority samples at relatively older ages for analysis. (These samples, of course, will increase substantially in the 2002–06 data collection rounds.) The child data collection includes a fairly wide range of information asked of the mothers and children about school progression patterns, parent-school interaction processes, and child and parental satisfaction with the child's schooling. The young adult survey collects a range of information about the high school completion process as well as college attendance. If a young adult has attended college since the date of last interview, the name of the current or most recent college attended is asked as well as the start and stop dates for attendance. Young adults in college are asked their major, whether they are part or full-time students, the cost of attending college, and if they have received degrees of any type. The young adult surveys ask questions about financial aid: whether or not a loan was received and, if so, the amount and how much of the years expenses it covered; whether or not the young adult received work study, scholarships, grants, fellowships, assistantships, as well as various other forms of help from government, institutions, friends, or family. Beginning with the year 2000 data collection, there is an additional series of questions that ask about all colleges that have been applied to and whether or not the youth was accepted. Given that these questions have been asked repeatedly since 1994, the data now permit one to construct college trajectories for a relatively large disadvantaged population. These college profiles can be linked with early employment success, differentiating between white, black, and Hispanic youth.

One can also link these educational profiles with early adult family-related activities. With regard to all these processes, it is possible to clarify the extent to which the cognitive and socio-emotional tests administered in earlier waves either directly to the child or by

maternal proxy are indeed useful predictors of early career or family success, independent of the host of family factors known to be associated with child development. With respect to evaluating the relevance of various forms of college trajectories, a key issue would be to explore causal dimensions of the child assessment-college involvement-early post college “success” trajectory. Users should note that detailed geographic information, as well as information identifying specific colleges, is now available on the young adult geocode file.

Within-Family Differences in Outcomes

This topic has already been addressed in several places throughout this volume, particularly in Chapter 1. Because the NLSY79 child sample is comprised of all children born to female respondents, many sibling clusters have been interviewed over time. For many years, it has been possible to explore the origins of differences between siblings in cognitive, emotional and particularly behavioral outcomes. It has been possible to clarify the independent impact of differential family behaviors that could be conditioned by the reality that children from the same parents may nonetheless encounter different family processes reflecting factors such as variations in their parents’ life cycle stages or sibling placement or gender.

One can now follow many of these same siblings into the young adult years. The numbers of such children available for analysis may be noted in several tables mentioned earlier. There are substantial numbers who have one to three siblings, and the bulk of these siblings are now of young adult age. In addition to sharing many common data elements, the siblings also have many potentially unique background characteristics that can be used to sort out and perhaps explain behavioral differences for a range of outcomes. The HOME scale can provide insights into variations in child raising patterns by child parity, gender, or other characteristics such as health status. Many of the older children and young adults are within two or three years of each other in age so their outcomes, such as employment or family attributes can be measured at approximately similar life cycle points. Of course, with every additional survey round, the heterogeneity of the sample increases, bringing more children who have been born to a wider age range of mothers. It is feasible, for example, to explore how child-raising practices for individual young women may be sensitive to the age of their mother at birth, and how this may translate into considerable variation in adolescent and young adult behaviors for children in the same family. Items from the geocode file could be

used to clarify the impact of geographic moves, neighborhood characteristics and the life cycle stage when these events occurred on subsequent behaviors and attitudes, controlling for many other commonalities within a family. From the perspective of younger children, it may be possible to establish whether early and repeated movement impedes intellectual and behavioral development for some but not all children in a family, as suggested by some child development research.

Child Health and Child Outcomes

Over the years, the NLSY79 child interviews have included a number of measures designed to measure various dimensions of the physical and emotional development of the children. Mothers have reported on limiting health conditions, utilization of health services, and illness and accidents. This information can be linked with all the other developmental and behavioral information available about the child and his/her family.

The health data collection for each child essentially begins prior to the birth of the child, and encompasses the wide range of prenatal inputs about the mother's behavior and attributes (including weight gain during pregnancy and key facts about each pregnancy and birth), as well as summary health measures for the mother, including periodic weight and height measures over her own NLSY79 time line. Table 4.4 summarizes the types of health variables found in the child data files. Key health items from the Young Adult surveys are listed in Table 4.5.

Table 4.4. Health Data in the NLSY79 Child Surveys

Child Health	1986	1988	1990	1992	1994	1996	1998	2000
Child's eye and hair color	M							
Does health limit school or play	M	M	M	M	M	M	M	M
Physical, emotional, or mental condition requiring: treatment, medicine, or special equipment	M	M	M	M	M	M	M	M
Type/duration of limiting health conditions	M	M	M	M	M	M	M	M
Accidents/injuries needing medical attention in last 12 months	M	M	M	M	M	M	M	M
Accidents/injuries needing hospitalization since last interview/since birth		M	M	M	M	M	M	M
Number of illnesses requiring medical attention or treatment	M	M	M	M	M	M	M	M
Date of last routine health checkup	M	M	M	M	M	M	M	M
Menses; age at 1 st menarche for female child (and mother)	M	M	M	M	M	M	M	M
Right/left handedness						M	M	M
Date of last dental checkup/work	M	M	M	M	M	M	M	M
Source of health insurance, if any	M	M	M	M	M	M	M	M
Behavioral, emotional, or mental problems; did insurance cover doctor visit	M	M	M	M	M	M	M	M
Or prescription drugs taken to help control activity/behavior	M	M	M	M	M	M	M	M
Height and weight of child	M-I	M-I	M-I	M-I	M-I	M-I	M-I	M-I
Healthcare during pregnancy leading to child's birth ¹	M	M	M	M	M	M	M	M
Postnatal infant healthcare and feeding ¹	M	M	M	M	M	M	M	M
Temperament Scales (<4 years)	M	M	M	M	M	M	M	M
Motor and Social Development Scale (<4 years)	M	M	M	M	M	M	M	M
Behavior Problems Index (4+ years)	M	M	M	M	M	M	M	M
Cigarette use; age first smoked; frequency		C	C	C	C	C	C	C
Alcohol use; age first drank; frequency		C	C	C	C	C	C	C
Marijuana use; age first used; frequency		C	C	C	C	C	C	C
Substance use (like glue, gas, sprays, fluids) that are "sniffed/huffed"; age first used; frequency					C	C	C	C
Other drug use (LSD, cocaine, uppers, downers); age first used; frequency		C	C	C	C	C	C	C

NOTE: Users are reminded that, while child and young adult health items are presented separately in these tables, all child health items were collected for young adults when they were age 14 or younger in the years their mothers were interviewed.

"C" denotes child report.

"M" denotes mother report.

"M-I" denotes either mother report or interviewer measurement; flag indicating source of report appears in the data file for each survey year.

¹ Pre- and postnatal items have been asked in the mother's main Youth interview since 1982 so that most information has been collected for most births. This information includes child's birth weight and length, mother's weight gain, type of delivery, etc.

Table 4.5. Health Data in the NLSY79 Young Adult Surveys

Young Adult Health	1994	1996	1998	2000
Does health limit work/school	YA	YA	YA	YA
Type and duration of health limitation	YA	YA	YA	YA
Recent accidents, injuries, illnesses, hospitalization ¹	YA	YA	YA	YA
Height, weight	YA	YA	YA	YA
Right/left handedness		YA	YA	
Menses information (females)	YA	YA	YA	YA
Health insurance coverage for self and for child(ren) ¹	YA	YA	YA	YA
CES-Depression Scale (7 items)	YA	YA	YA	YA
Prenatal care (females)	YA	YA	YA	YA
Health care and nutrition during pregnancy (females)	YA	YA	YA	YA
Cigarette and alcohol use during pregnancy (females)	YA	YA	YA	YA
Drug use during pregnancy (females)	YA	YA	YA	

NOTE: Users are reminded that, while child and young adult health items are presented separately in these tables, all child health items were collected for young adults when they were age 14 or younger in the years their mothers were interviewed.

¹ Information on recent illnesses, routine check-ups, and health insurance for young adults living in the mother's household is reported by the mother in the fertility section of the main Youth interview. All other young adult health items are obtained through the Young Adult report.

During the first year of life, there is a relatively intensive body of child health information that asks about early infant-birth connected health problems, as well as medical visitations for both sick and well care, including the nature of the contact, and the need for hospitalization. During the first four years of life, mothers complete a motor and social development scale about each child (described in Chapter 2) that assesses the maturational development of the child compared to other children his or her age. Height and weight are reported or measured at each interview point. On a continuing basis over the child's/young adult's whole life, there are biennial reports on child accidents, injuries, and hospitalizations. This information is subject to some censoring as noted in Chapter 2. One advantage that this data collection provides over institutionally collected health data is that, because it is self-reported by mother or child, it avoids biases that may be linked with race, class, and ethnic differentials in the likelihood that specific groups may actually contact appropriate health individuals or institutions. For most years this is a maternal report, but as the children age into the young adult years, they are based on self-reports.

Over the surveys, there also is considerable ancillary information collected about each child that details limiting health conditions (with respect to school, peers, and work);

emotional problems; and the utilization of specialized medical, dental, and psychiatric services. Much of this information has been collected repeatedly for each child, and collected for each child in a family unit. These data are useful not only for profiling children's developmental paths over time, but also for enhancing interpretations of both children's and mother's behavior over time from a causal perspective.

The discussion in this chapter is not intended to be all-inclusive, but rather to suggest avenues for approaching the data. The development of these or other topics must of necessity draw on a variety of other NLSY79 informational sources. These include the other chapters in this volume, the *NLS Handbook*, the *NLSY79 User's Guide*, various child health materials, and in particular, the various child and young adult interview schedules. Access information about these and other relevant materials, including how to obtain the data, may be found on line at <<http://www.bls.gov/nls/nlsy79ch.htm>>. Chapter 5 describes in greater detail the procedures for using and linking some of these data sources.